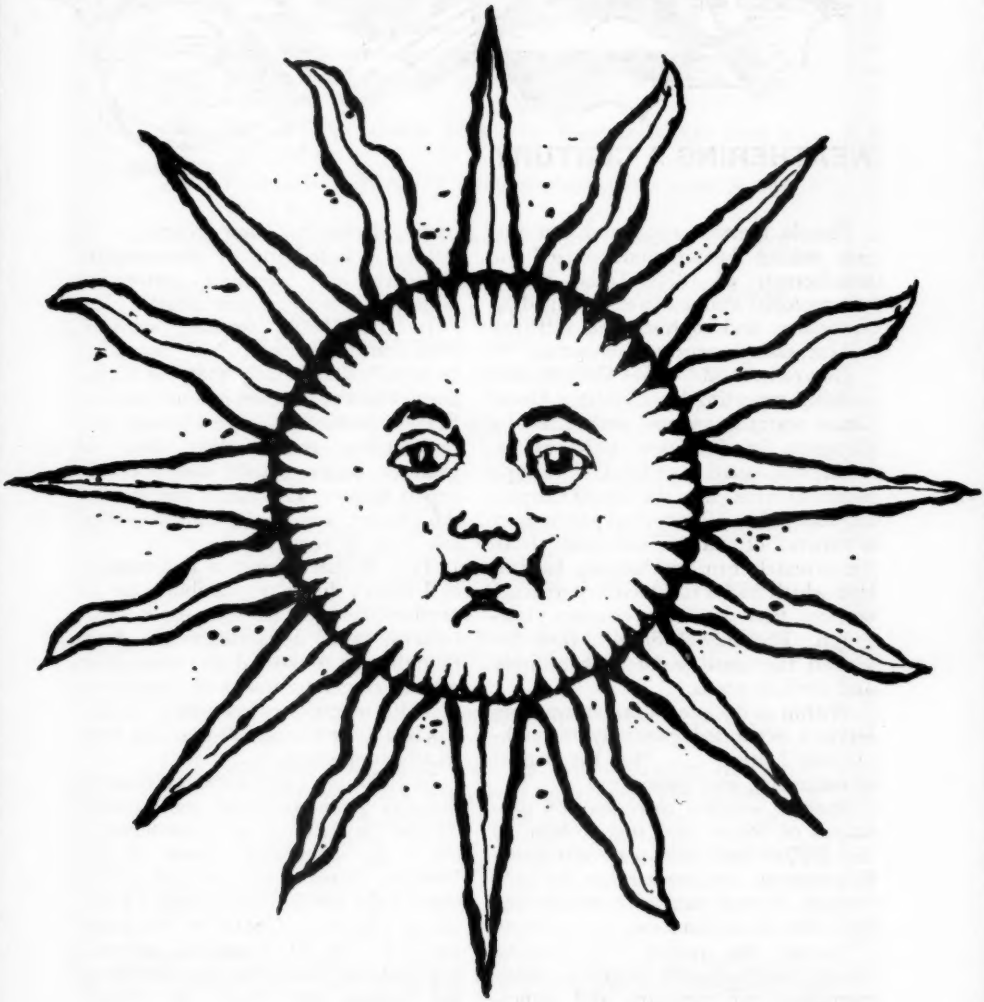
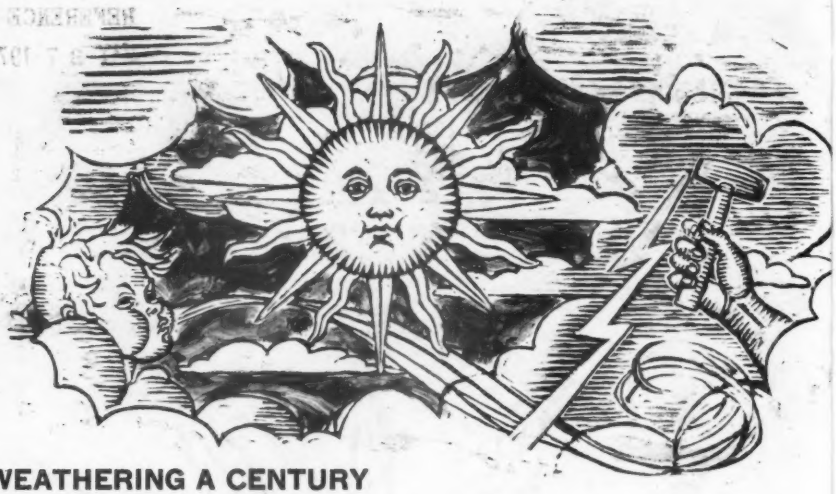
COLUMBUS PUBLIC LIBRARY
REFERENCE
MAY 27 1970
BH
8047

agricultural SITUATION

the crop reporters magazine
U.S. Department of Agriculture Statistical Reporting Service June 1970.



WEATHERING A CENTURY



WEATHERING A CENTURY

Simple thermometers and wet fingers poking the air characterized the weatherman of 1870. Today he's a climatologist attuned to electronic data processing and sophisticated satellites for increasing accurate forecasting.

Coordinated U.S. Government weather reporting began with a Great Lakes warning system, authorized by Congress in February 1870 as an additional function of the U.S. Army's Signal Service (now the Signal Corps). By 1880, the military had taken over a network of stations, and staffs, from the privately run Smithsonian Institution which had a rudimentary weather service tied by cross-country telegraph. The Signal Service then reviewed the weather for both military and civilian needs.

Within a decade, weather warning services expanded generally throughout the Nation . . . "for the benefit of commerce and agriculture . . ."

Special weather forecasts for producers of cotton and sugar began in the 1880's—first large-scale systematic Government weather services for agriculture. It was part of a broadening operation of civilian weather services.

During this period the Government's weather staff began to study tornadoes, air moisture and atmospheric electricity. Their growing technology included use of thermometer exposure and wetbulb conversion tables to determine dew point.

In the 1880's, weather services, responding to needs, had expanded so rapidly and greatly that the Signal Service had more than it could handle. Finally, in 1890, Congress passed bills transferring the civilian part of weather service from the overburdened Army to the calmer precincts of the Department of Agriculture—then less than 30 years old.

That transfer began a half-century of USDA's direct responsibility for all civilian weather services—both agricultural and nonagricultural. And, though most of these duties were given over to the Department of Commerce in 1940, where they are today, USDA has had a continuous 80-year link with weather reporting.

In 1965, the Environmental Science Services Administration was created by the Department of Commerce to cover the expanded duties of the Weather Bureau. And in 1968, ESSA opened the special Agricultural Climatology Office at USDA in Washington, D.C. The ACO analyses national, regional, and State weather conditions for farmers, and clears the Weekly

100-Year Weathervane

1870 February 9; President Grant signs Congressional Resolution setting up a national weather service under U.S. Army's Signal Service.

1880 United States-Britain cooperate on International Atlantic Storm Warning Service.

1890 President Harrison transfers civilian part of weather services from Signal Corps to USDA. For first time, it's called "The Weather Bureau."

1900 USDA's Weather Bureau stresses more services to farmers.

1902 First wireless forecasts *sent* by Weather Bureau to ships at sea.

1905 First wireless reports *received* by Weather Bureau from a ship at sea.

1907 First daily exchange of weather observations with Russia and Asia.

1910 First Weekly Weather Bureau Outlooks issued for agricultural planning.

1912 U.S. Coast Guard begins International Ice Patrol following Titanic disaster in North Atlantic.

1913 First fire-weather forecast issued.

1914 Weather Bureau sets up special section to meet needs of fledgling aviation.

1924 Military meteorologists aid U.S. Army aviator on first round-the-world flight.

1934 Weather Bureau reaches forecasting milestone: sets up airmass analysis section.

1935 Weather Bureau inaugurates improved 24-hour hurricane warning system.

1939 First automatic telephone Weather Bureau service begins for New York City.

1940 Weather Bureau transfers from USDA to the Department of Commerce. During WWII, Weather Bureau first employed female technicians.

1950 Radar, rockets, and computers open new technological doors for weathermen.

1965 Environmental Science Services Administration (ESSA) encompasses these services to the public: The Weather Bureau, ESSA Research Laboratories, National Environmental Satellite Center, Environmental Data Service, and Coast and Geodetic Survey.

1970 U.S. Weather Services enter their Second Century of Service.

Weather and Crop Bulletin issued to the farm and agribusiness community (about 3,000 copies weekly) by ESSA.

A USDA statistician, ESSA-trained, is detailed to the ACO to analyze the data from weather observations, edit the agricultural parts of the weekly bulletin and write the National Agricultural Summary. These reports inform farmers on weather and crop conditions in all areas of the country, and help them "live with" their most mischievous ingredient for success or failure—the weather.

BEFORE THE BUREAU

Although Government weather services have rounded out a century, other forms of reporting stretch back to earliest American history.

The Pilgrims of Plymouth, beginning in 1664, kept a record of weather observations. A bit later, scientific farmers like George Washington and Thomas Jefferson kept wary eyes on the weather, attempting to draw conclusions from their observations to help in agriculture. Ben Franklin's kite-in-a-thunderstorm experiment is legendary. But few in this century realize Franklin was the first to deduce the progressive movement of a total storm system.

As early as in the War of 1812, the Army tried to keep up with weather changes. At the time, the Surgeon-General's deep interest in effects of weather on health led to official collection of data on climatology.

Around 1845, the semi-public Smithsonian Institution supplied special observational equipment to a network of cross-country telegraph operators and began collecting weather data. The system was the forerunner of formal U.S. weather reporting.

Today's well-informed farmers and ranchers use, along with modern equipment and techniques, weather services not even dreamed of a century ago. But they still have to worry about the weather, finding it at best, devious; at worst, disastrous. Each year, ESSA weather people bring the farmer better forecast information for less risk in agriculture.

USDA's Economic Research Service also conducts pertinent weather services. Recently, ERS completed two pilot programs on methods of projecting weather-caused variations in crop yields. The work was done with the Iowa and Oregon Experiment Stations.

In another study, ERS is trying to label the probable days good for field work within the season at certain locations. This would help farmers schedule work loads and equipment needs. The agency also is attempting to estimate costs and benefits of hail suppression.

Finally, SRS, for the benefit of producers and commodity buyers, issues timely weather notices and summaries of any crop damage following freezes, heavy storms, floods, and other weather catastrophes affecting crops.

But if Government weather services have made strides during their first hundred years, the second century promises some really exciting possibilities: weather satellites, now in their infancy, will have come of age; aerial photography, remote sensing equipment, rocketry and the evolving era of the laser beam will all play their parts; rainmaking, hail suppression, cyclone control, and more may be possible.

Doubtless, new theories not yet imagined, new methods not yet devised and new approaches now barely emerging will be a way of life for climatologists. Weathermen may be on regular detail in space—calling the weather "shots" to 21st Century farmers, exchanging data as easily as ship to shore messages are handled now. You may even order your 4th of July picnic weather.

To give our readers a clearer picture of U.S. farming in all its modern diversity, Agricultural Situation presents the third in a series of farm photo-essays. These farms have been selected by USDA farm management specialists as typical of good commercial farm businesses in various production areas.

They are *not* average farms . . . they are definitely above average. But they are not showplaces either. They represent the modern farm businesses that can be readily found in their production areas, and which produce the bulk of America's farm products today.

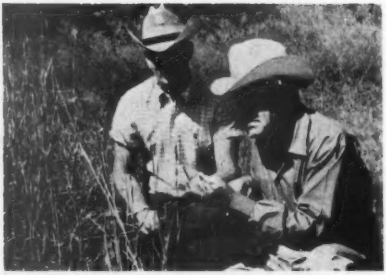
PORTRAIT OF A RANCH

Sam Davis, ranch in northern Texas produces feeder calves for fattening in the feedlots of the Corn Belt. The ranch includes more than 7,700 acres of land like this—broad, rolling plains covered with bunch grasses and brush, broken by occasional rocky hills. It is arid country—about 25 inches of rainfall in the average year—which makes crops risky and limits the number of cows that can graze without destroying the grass.

Davis has feed for about 350 brood cows and 17 bulls—which produce about 310 calves a year. Most of the calves are born in the fall, stay on the range until they are 9 or 10 months old. Davis keeps about 55 of the young females for replacements, sells the rest for fattening.

The ranch sells about $50,000 worth of livestock per year. About a third of this is net income. Labor and other production expenses eat up the rest. The ranch land has been rapidly increasing in value, and is now worth over $700,000.

Davis owns 5,600 acres, leases the other 2,100. He inherited his land



from his father, who bought it from one of the huge ranches common in the earlier era of the Texas longhorn and the open range.

Davis, in his mid-fifties, runs the ranch with one full-time foreman. They get part-time help from the foreman's teenage sons, and vacationing students or three or four cowboys to help out during peak work periods. Fence-building and other large jobs are done by contractors.

Texans still use horses to work their cattle, but Davis' ranch equipment also includes 26 miles of fencing, feed storage bins, two trucks, a large tractor, and various smaller pieces of machinery.

Davis and his wife live in a pleasant three-bedroom home in the nearby town of Throckmorton. Both are college graduates.

Water is a constant problem because of the low rainfall and the lack of underground water for wells. Davis has gradually increased his water supply with ponds that trap and store the rainfall for stock water. The water level in this new pond will eventually be at Davis' feet.

Davis says the ranching business is changing fast. Feedlots no longer care about his purebred Hereford bloodlines, are more interested in fast-gaining hybrids that will grade high at the slaughterhouse. He's buying 30 Angus heifers to cross with his Hereford bulls.

He thinks small spreads like his will eventually combine into larger operations through partnerships or cooperatives.

TRACTOR NOISE:

DECIMATE THE DECIBELS

After doing some tractor work, did you ever have the following effects:

—Your ears rang or you suffered head noises for a few hours after you got off the tractor.

—Speech seemed muffled when others talked to you, but the hearing loss disappeared after a few hours.

If you did, your tractor makes too much noise, and you may suffer a permanent hearing loss.

Let's look at how much noise is too much and what a tractor driver can do about it.

Sound is a series of airborne vibrations at various levels. One method of measuring it is the decibel scale, which measures intensity. For example, the difference between a whisper and a cement drill is not just loudness, it's also intensity. The drill makes a sound that you feel as well as hear.

Compare the following sounds on a decibel scale:

Decibels:

20_____Soft whisper
40_____Average office
60_____Conversation
80_____Street traffic
90_____Pneumatic drill
110_____Boiler shop
120_____Airplane
130_____Shotgun
140_____Firecracker, near ear
150_____Heavy rifle
160_____Jet with afterburner

Around 85 decibels is the starting point for the danger level. Tractors emit from 80 to 110 decibels, depending on the load and other factors.

Tractor companies are concerned with the problem and are spending time and effort to cut down on the noise levels of tractors and other farm machinery. New tractors feature soundproof cabs. An unsoundproofed cab is not enough. In fact, the weight of the cab increases the tractor's load and the noise level.

South Dakota State University has three recommendations about tractor designs that would reduce noise levels:

—larger more efficient mufflers.

—exhaust extensions which carry the exhaust above the operator's level.

—mounting the muffler 45° away from the operator.

Home remedies that will minimize noise damage to your ears include ear plugs or ear protectors.

Homemade earplugs generally offer no protection. Get either conventional plugs, or the two-stage kind that muffles loud sounds but allows ordinary ones to be heard.

Special ear protectors, which look like a pair of hi-fi earphones, can be bought for about $10 to $14. They are worn by airport personnel to muffle dangerous decibels from jets.

ON-FARM ACCIDENTS

Machinery may lighten your farm labor—but it also saddles you with the responsibility of being a careful and cautious operator.

In most recent years, machinery was involved in about two-fifths of the Nation's on-farm deaths. Many happened when tractors upset and crushed their operators.

Teenagers 15 to 19 were especially prone to machinery mishaps, as were people over 45 who apparently were less alert and agile physically.

Persons in their middle years suffered the fewest fatalities involving machines, probably because they were more experienced and careful.

Machinery and tractor accidents are most frequent when crops are being planted, cultivated, or harvested—so be especially cautious at these times.

THE SIXTIES:

LOOKING BACK

Research helped make the 1960's an agricultural success story in technology, production and distribution. There were advances in fertilizers, seeds, feeds and planting practices (narrow-row corn) and in new grain varieties (short-strawed wheat and rice strains) that increased yields and production.

The laboratories yielded flame-proof fiber treatment, wash and wear fabrics, advances in dehydration methods for coffee, fruits, vegetables, meats and dairy products. There were new modes of packaging, distribution, and store layout to speed farm products more efficiently to the consumer.

The 1960's also saw marked improvement in USDA's continuing program of crop reporting—improved data processing and the use of new techniques such as aerial photography and remote sensing from space.

New Inputs

Formula feeding of livestock and poultry became more sophisticated in the 1960's. Minerals, antibiotics and other microingredients were added to concentrated feeds, boosting livestock gains to more efficiently and economically respond to rapidly growing demand.

New grain developments emerged in the 1960's. New rice varieties have boosted production since 1967, both in the United States and in food-scarce lands such as India, Pakistan and the Philippines. An international effort, the strains of rice were derived from Asian grain developed at the International Rice Research Institute in the Philippines. Mexipak, and similar new varieties of wheat, went through experimental fields in Mexico.

Biological Sciences

Important genetic discoveries also came from the laboratories in the 1960's. For example, USDA's Beltsville facility further advanced work begun in the 1950's on fatherless turkeys—born by parthenogenesis: that is, from double sets of chromosomes in unfertilized hen's eggs. By 1963, the turkeys had produced two generations of "fatherless" birds. (However, parthenogenetic offspring aren't robust enough for commercial production.)

USDA scientists also expanded the insect control technique of sterilizing males and setting them free to mate with females, which then lay sterile eggs. The scientists are including more pest species in their research, and they are seeking and testing chemicals as sterilants to eliminate the expensive equipment needed with irradiation.

A few promising chemical sterilants carry a bonus—unlike irradiation which lessens sexual vigor, they actu-

ally stimulate it. Sterilization, of course, is less dangerous to the environment than other means of insect extermination.

Former ARS scientist, Dr. Robert Holley, working with ARS and Cornell University scientists, determined the molecular structure of one of the ribonucleic acids (RNA) found in living cells. Nucleic acids carry and transmit the genetic characteristics of life. This research has been hailed as a giant step toward understanding how plant and animal cells manufacture protein, knowledge which may someday enable man to control diseases that result when cells make defective proteins. For his work on RNA, Dr. Holley received a Nobel Prize in 1968.

Other New Processes and Procedures

USDA devised a method of using a laser beam to keep machines on a straight course while laying continuous plastic tubing for field drainage.

Food laboratories produced processes including freeze-drying dehydrofreezing, vacuum and spray-foam drying of foods. These foods gained shelf space in the 1960's, as demand for convenience forms advanced.

Advances in packaging and transportation have brought greater efficiency and economy in food handling. Packaging techniques popularized in the 1960's include aluminum containers; lightweight steel cans; tab-pull openers; food pouches of plastic, paper and foil.

Innovation in Crop Reporting

One of the historic duties of USDA is crop, livestock, and price reporting. SRS completed a century of continuous reporting in 1966 by expanding survey techniques and data processing facilities to insure higher accuracy and more rapid computation of data for all involved in agriculture.

COUNTING ON MINK

Mink are moving from forest to farm, and mink breeders have asked SRS to keep track of them. The industry figures there are about 3,000 mink ranches—across the country, but firm data of this multimillion dollar farm business require regular SRS surveys.

Congress voted funds last December for USDA to set up a systematic annual count of mink ranches, pelts and bred females—classified by color groups: Standards, pastels, pale browns, sapphires, gunmetals, platinums, pearls, lavender-hopes, violets, whites and mutation pelts.

SRS is setting up the survey and expects to have data ready for publication in late May or June.

Until now, mink were counted unofficially, based on National Board of Fur Farm Organizations' membership lists and data. And data were derived from sales at wholesale auctions and reports from ranchers.

According to NBFFO some 15 States have sizable numbers of mink farms—with Wisconsin and Minnesota the leading States. Operations appear to be concentrated in Northern Plains States; however, Oregon, Ohio, Utah, and New York, for example, also produce mink.

A negligible number of wild mink are still trapped commercially in the United States, generally for the export market.

Raising mink is a delicate business. The animals require special handling and special breeding techniques during the 1-month breeding period each year. Feed accounts for at least half the costs of raising them to maturity.

Last December, in the enumerative survey, based on land area segments, SRS added a question, screening farm operators to collect names of mink breeders. They checked this list of names against the NBFFO list for completeness as a preliminary to the first official SRS survey this spring.

California agriculture—what makes it so special?

Ward Henderson, Statistician in Charge of USDA's Crop and Livestock Reporting Service in Sacramento, has this answer: Diversity.

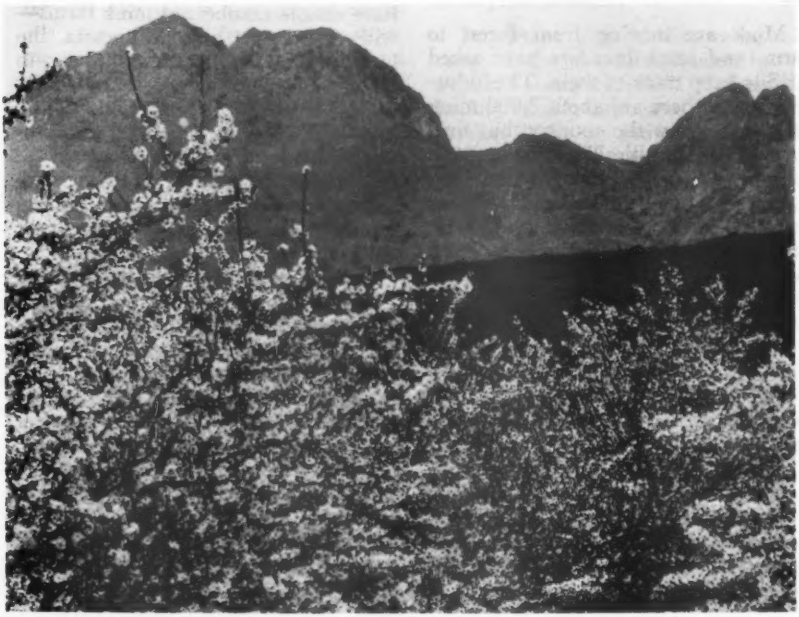
When you add up all the different crops produced in the Golden State, the total tops 200. Just about everything grown anywhere in the United States is also raised in California—and there are many items that crop up nowhere else.

Henderson's office keeps close track of about 80 crops—the ones that account for the bulk of farm income. Grapes were the biggest of these in 1969, valued at $222 million.

But you can't discount the importance of the lesser crops—for there are many of them worth a lot of money.

Bok-Toy, chayote, fava beans, kiwi fruit—somewhere in California some farmer is growing these exotic crops for sale to specialty stores throughout the Nation.

Altogether, more than 60 different fruits, vegetables, and nuts are in the exotic category—and they contributed $6 million to the State in 1968.



Seeds, of course, are a Golden State specialty. About 30 kinds of vegetables are harvested as *dry* seeds—among them beans, beets, carrots, cabbage, cauliflower, mustard, sweet corn, onions, lettuce, peas, and spinach.

Then there are the *wet* seeds—from peppers, eggplants, squashes and pumpkins, cucumbers, melons, tomatoes, and so forth.

Finally, follow the flower seeds—too numerous to name because California grows most of the total produced in the United States.

The Golden State is also the Nation's No. 1 grower of nursery products and cut flowers; it's big in seasonings and condiments; and it even produces four drug crops—castor beans, belladonna, henbane, and stramonium. (The last three are frequently used in treating asthma.)

The tremendous diversity of Golden State agriculture reflects its wide range of soil and climatic conditions.

Most of the major farming areas have long growing seasons—240 to 365 days. That means farmers can double crop, if they choose, or vary crops depending on the season.

Also, there's no rain during a major portion of the growing season in California's biggest farming areas. Consequently, farmers have free access to fields for insect and disease control—and there's less damage to crops.

Irrigation plays a tremendously important role in the State's agriculture. Well over 90 percent of farm production is irrigated. Much of the State's productive farmland would be barren desert without the supplemental water stored in the Sierras.

Livestock, left out of this discussion so far, can't be ignored. In any list of California's top 20 agricultural endeavors, production of cattle and calves stands No. 1; production of dairy products, No. 2. (And though few people realize it, the Golden State is the Nation's leading producer of eggs, turkeys and rabbits.) Then follows the long list of crop products—which grow in such profusion.

CALIFORNIA FIRSTS

Below are listed the 46 commercial crops and livestock commodities in which California leads the Nation. A large number are specialty crops in which the Golden State accounts for most of the U.S. supplies.

Crop	*Percent of U.S. output*
Alfalfa seed	99.9
Apricots	97.1
Artichokes	99.6
Asparagus	46.2
Avocados	71.8
Blackeye beans	N.A.
Boysenberries	69.4
Broccoli	84.8
Brussel sprouts	89.2
Cantaloups	64.6
Carrots	42.9
Cauliflower	67.2
Celery	58.6
Cut flowers	16.5
Dates	99.3
Eggs	11.8
Figs	99.0
Flower seeds	N.A.
Garlic	92.5
Grapes	91.7
Honey	8.2
Ladino clover seed	100.0
Lettuce	64.7
Lima beans	48.1
Melons, honeydew	83.6
Nectarines	98.2
Nursery stock	20.7
Olives	99.9
Peaches	60.4
Pears	55.3
Peppers, chili	99.9
Persimmons	92.0
Plums	99.0
Pomegranates	99.9
Potted plants	16.5
Prunes	99.9
Rabbits	N.A.
Safflower seed	94.8
Spinach	43.9
Squash	N.A.
Strawberries	55.4
Sugarbeets	23.5
Tomatoes	65.6
Turkeys	14.1
Walnuts	96.4

N.A.—Not available.

outlook

Digested from outlook reports of the Economic Research Service. Forecasts based on information available through... May 1, 1970

SOYBEAN GROWERS plan a record acreage for the 10th year in a row—which could put supplies for 1970–71 near the current season's record volume. Production in 1970 probably will top last year's 1.1 billion bushel crop, but carryover this September may be smaller.

●

SOYBEAN USE is soaring this year . . . could, in fact, register a record gain of one-fifth over last year's 945 million bushels. Back of the boom in demand: relatively small commercial carryovers last fall at home and abroad . . . rising requirements for oil and meal around the world . . . and smaller global supplies of competitive meals and oils.

●

OTHER OILS AND FATS . . . U.S. output of cottonseed oil, peanut oil, lard, and butter is running lower this year and prices are up. This has boosted the domestic demand for soybean oil and despite increased output, prices have strengthened. Soybean oil prices (crude at Decatur, Ill.) topped 12 cents a pound in March, about 2½ cents over 1968–69.

●

INEDIBLE TALLOW and grease production may be up slightly from 1968–69's 4.6 billion pounds. Bigger cattle slaughter is responsible because hog slaughter is off. Domestic use continues heavy. For the year it could reach 2.8 billion pounds, up from the record 2.7 billion of 1968–69. Contributing to the rise: growing demand for tallow in animal feeds and fatty acids.

●

FATS AND OILS EXPORTS rose to a record 7.78 billion pounds in 1969—primarily because of big gains in our overseas shipments of soybeans, cottonseed oil, fish oils, and lard. Oilseed cake and meal exports were also record large at 10.8 million tons. Of this, about three-fifths was soybeans and nearly a third soybean meal.

1970 TOBACCO CROP, judging from farmers' planting intentions and average yields, may total about 1.8 billion pounds—nearly the same as in 1969. That would make output this year about 150–200 million pounds short of projected needs for 1970–71—so carryover will probably decline again.

●

CIGARETTE OUTPUT, which takes most of the tobacco crop, declined in 1969 for the first time in 5 years. Last year's 4-percent production cut was sharper than the 1964 drop when the Surgeon General's report on smoking and health was issued. But it still wasn't as big as the drop in 1954 when research linking cigarette smoking and lung cancer was first publicized.

●

CIGARETTE CONSUMPTION by U.S. smokers in 1970 may hold at last year's level or decline slightly. However, exports probably will be steady or show a gain. Last year, U.S. smokers used 3 percent fewer cigarettes than the year before and exports fell 6 percent from the 1968 record.

●

COTTON CARRYOVER CUT . . . This summer's carryover still looks like it'll end up close to 6 million bales—half a million under last year and smallest since the early 1950's. Cotton use in 1969–70 is down—but it's really the very small 1969 crop that's back of the carryover drop.

●

U.S. FIBER USE came to about 10.3 billion pounds in 1969—with 55 percent of that manmade. While total domestic use was near 1968's record high, per capita consumption dipped slightly to 50.5 pounds. Reason for the drop: a 1.4-pound cutback in per capita cotton use, which is now the lowest since 1934.

●

FIBER PRICE PICTURE . . . Price competition between cotton and manmades is getting hotter—even though, on the surface, cotton seems to have a big advantage. The cotton price for Strict Middling 1 1/16 inch is about 29 cents per pound. This compares with a list price of 61 cents per pound for 1.5 denier polyester staple.

●

MORE THAN MEETS THE EYE . . . Figure fiber prices on a cotton equivalent basis, however, and this is how they stack up: 33 cents per pound for cotton, 51 cents for polyester. And list prices for polyester reportedly are being discounted a fourth or more. Really, the implied difference between cotton and polyester is only 5 cents per pound or less, compared with a margin of 25–30 cents 3 years ago.

WOOL PRICES SOFTEN . . . Prices of domestic and imported apparel wool have been drifting down since the first half of 1969—as major manufacturing countries cut use and world supplies stayed large. Here in the States, shorn wool prices in 1970 probably won't match last year's overall average of 41.8 cents a pound, reflecting the world price weakness.

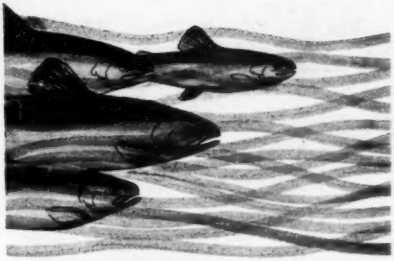
●

APPAREL WOOL USE . . . Per capita U.S. use came to 1.6 pounds in 1969—a tenth less than the year before. The 10-year average, 1958–67, for domestic per capita use was 1.9 pounds. Manmades are cutting into wool use, too.

STATISTICAL BAROMETER

Item	1957–59 average	1969	1970—latest data available	
Prices received by farmers	100	114	116	April
Prices paid, interest, taxes, wage rates	100	127	132	April
Parity ratio (1910–14=100)	—	74	72	April
Consumer price index, all items	100	128	133	March
Food	100	126	132	March
Agricultural exports ($bil.)	4.2	5.9	.6	March
Agricultural imports ($bil.)	3.9	5.0	.5	March
Personal income ($bil.)	321.5	629.7	[3] 659.9	
Expenditures for food ($bil.)	66.3	103.6	[2] 109.0	
Share of income spent for food (percent)	20.6	16.5	[2] 16.5	
Farm food market basket: [1]				
Retail cost ($)	983	1,173	1,224	March
Farm value ($)	388	477	507	March
Farmers' share of retail cost (percent)	39	41	41	March
Realized gross farm income ($bil.)	36.5	54.6	[3] 55.1	
Production expenses ($bil.)	24.9	38.6	[3] 38.9	
Realized net farm income ($bil.)	11.6	16.0	[3] 16.2	

[1] Average quantities per family and single person households bought by wage and clerical workers 1960–61 based on BLS figures.
[2] Annual rate, seasonally adjusted first quarter.
[3] Annual rate, seasonally adjusted fourth quarter 1969.



FREE OFFER:

could trout farming be profitable for you?

Trout farming—the business of raising and selling high quality trout or eggs—could it pay off for you?

Here's a free pamphlet that details what you'll need to know about planning and establishing a fish farming operation—and where you can get professional help. For your copy of *Trout Farming,* L552, send a post card with your name, address, and zip code to:

TROUT
c/o Agricultural Situation
OMS, USDA
Washington, D.C. 20250

PORKERS' REPORT CARDS

How high are your pigs' I.Q.'s? Never paid it any mind? Well, scientists at the University of Kentucky experiment station have—and their findings could prove important to you.

The smarter your swine are, the better they're going to be at using self feeders, temperature controls in housing units, and other devices you install for them.

The Kentucky researchers tested pigs of many different breeds—and found that their "A" students turned out to be Duroc pigs at all ages. Hampshire porkers, in contrast, were the most thick-headed. In the experiments, the animals were required to respond to a warning signal by jumping a barrier or they received an electrical shock through a grid floor.

Within litters, younger pigs usually learned better than their elders; heavier animals proved more intelligent than lean.

Through their research, Kentucky scientists hope to develop a breed of pig far superior to any swine now available for breeding purposes.

June 1970

Vol. 54, No. 5

In This Issue

AGRICULTURAL SITUATION

Distributed free to crop and livestock reporters in connection with their work.

All Articles May Be Reprinted Without Permission

Editor:
Geraldine Schumacher

The Agricultural Situation is a monthly publication of the Statistical Reporting Service, United States Department of Agriculture, Washington, D.C. 20250. The printing of this publication has been approved by the Bureau of the Budget (January 2, 1969). Single copy 10 cents, subscription price $1 a year, foreign $1.50, payable in check or money order to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

U.S. GOVERNMENT PRINTING OFFICE: 1970 O—383-517

UNITED STATES
DEPARTMENT OF AGRICULTURE
STATISTICAL REPORTING SERVICE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE & FEES PAID
United States Department of Agriculture